

DOCUMENT RESUME

ED 263 041

SO 016 886

AUTHOR Kaderabeck, Elizabeth A.
TITLE The Japanese Automobile Worker: A Microcosm of Japan's Success.
PUB DATE 81
NOTE 62p.; Partial funding received from the Japan Institute for Social and Economic Affairs. Newspaper reproductions may not reproduce.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Asian Studies; Buddhism; Comparative Analysis; Cross Cultural Studies; Cultural Awareness; Economic Development; Economic Factors; *Economics; Employer Employee Relationship; Employment Practices; Global Approach; *Industrial Structure; *Industry; Instructional Materials; Learning Activities; Secondary Education; Social Studies; *Success; Units of Study
IDENTIFIERS *Automobile Workers; *Japan

ABSTRACT

A teaching unit on the Japanese automobile worker was developed from a compilation of on-site interviews with Japanese company managers and production line employees, and official publications of the Japanese car industry. The unit is designed to present a balanced picture of Japan's economic success and labor relations and to develop global understanding. Material is divided into two main sections. Section one contains an essay presenting the author's view of Japan as a case study of Buddhist economics. Section two consists of four lessons which carry the students from a general overview of the Japanese economy to a specific detailed look at the Toyota Motor Company as an example of this economic system. Specific lesson titles are: Japan Information Inventory, Japan through Graphs and Charts, Toyota Spirit and Ideas, and Toyota Employee Profiles. Teachers' instructions as well as all student handouts are provided. Separate sections cover concluding activities, continuation activities, and a bibliography. (LP)

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THE JAPANESE AUTOMOBILE WORKER:

A MICROCOSM OF JAPAN'S SUCCESS

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ELIZABETH A. KADERABECK

1981

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This project is the result of a sixteen day fellowship in Japan during the summer of 1981. During that time a group of twenty educators were provided with a jam-packed opportunity to better understand Japan economically, socially and politically. The Japan Institute For Social and Economic Affairs, sponsor of the fellowship, is committed to cross-cultural understanding and experiences. Their efforts in providing the group with its diverse needs to accomplish developing educational projects for use in U.S. classrooms was outstanding. This project, in particular, could not have been completed without the cooperation of not only the institute but also the Toyota Motor Company, Toyoto Motor Sales Company and the Honda Motor Company.

All materials used in this project with the exception of the essay on Buddhist Economics are the result of dialogs with company managers, interviews with both management and production line employees, plant tours and printed material which provided all the statistical information as well as some of the written information.

The purpose of this project is threefold:

(1) To help the American student dispell some of the myths of Japanese economic success and give him/her a clearer picture of some of the factors contributing to Japan's success;

(2) To provide the American student with an opportunity to study the best example of a post-industrial society's attempts to deal with certain labor problems and compare it to the U.S.A.'s handling of such problems;

(3) To help the American student understand the concept of global-interdependence not only by examining Japan's role in world trade but also the United States' role as well.

This unit has been designed to be used in total over a period of three to five days or modularly to enhance existing lessons and themes. Each module , although related to the other modules, can be used separately.

Although this project was designed primarily for the New York State Afro-Asian Social Studies course taught at the ninth grade level, all or parts of this project have applicability to the following high school social studies courses:

- American Studies
- European Studies
- Electives on Asia
- Psychology
- Anthropology
- Economics
- U.S.-Foreign Relations
- 20th Century Problems in Democracy
- Global Studies
- Futurism

The project is essentially divided into two sections. Section I consists of an essay based on the writer's personal

philosophical approach to understanding and interpreting Japan's economic success. This section is "food for thought" for the teacher and thus should not be read by the student; however, as a culminating activity the teacher might expose the student to a summary of the essay and ask him/her to support or attack it based on their knowledge of Japanese business activities.

Section II consists of the four lesson modules. If the entire project is going to be used, it is highly recommended that the modules be covered in order. The intent of the ordering is to carry the student from a general, broad picture of Japan economically to a more specific, detailed look at Toyota Company employees as a model and back again to the broad spectrum.

Teacher instructions accompany each module as well as the sections on Culminating and Continuing Activities. All student hand-outs can be easily reproduced on any standard duplicating equipment.

JAPAN - A 20TH CENTURY ATTEMPT AT
BUDDHIST ECONOMICS

Chapter Four of E. F. Schumacher's book, SMALL IS BEAUTIFUL; ECONOMICS AS IF PEOPLE MATTERED, is entitled "Buddhist Economics". He starts the chapter by pointing out that if one of the Buddhist Eightfold Path is Right Livelihood, then there must be such a thing as Buddhist economics as opposed to western style "modern economics". Schumacher points out that invariably, developing countries have looked to the "so-called advanced countries" to advise them not recognizing that a Buddhist way of life would call for Buddhist economics instead of western, modern economics.

How does Schumacher define Buddhist economics? Starting with the function of work, he points out that in Buddhist eyes it is threefold: (1) to give man a chance to utilise and develop his faculties; (2) to enable him to overcome his ego-centeredness by joining with other people in a common task; and (3) to bring forth the goods and services needed for a becoming existence. On the other hand, Schumacher states that the modern economist has been brought up to consider "labour" or work as little more than a necessary evil. From the point of view of the employer, it is in any case simply an item of cost, to be reduced to a minimum if it cannot be eliminated altogether say, by automation. From the

point of view of the workman, it is a "disutility"; to work is to make a sacrifice of one's leisure and comfort, and wages are a kind of compensation for the sacrifice. In Buddhist eyes, to organize work in such a manner that it becomes meaningless, boring, stultifying, or nerve-racking for the worker would be little short of criminal...Equally, to strive for leisure as an alternative to work would be considered a complete misunderstanding of one of the basic truths of human existence, namely that work and leisure are complementary parts of the same living process and cannot be separated without destroying the joy of work and the bliss of leisure.

Schumacher goes on to say that there are two types of mechanisation which must be clearly distinguished: one that enhances a man's skill and power and one that turns the work of man over to a mechanical slave, leaving man in a position of having to serve the slave. How do you tell one from another? According to Ananda Coomaraswamy, a man equally competent to talk about the modern West as well as the ancient East, one needs only to look at the carpet maker himself. The carpet loom is a tool but the power loom is a machine. The tool assists man but the machine does the essentially human part of the work.

The Buddhist sees the essence of civilization not in a multiplication of wants but in the purification of human character. Character, at the same time, is formed primarily by a man's work. And work, properly conducted in conditions of human dignity and freedom, blesses those who do it and

equally their products.

From a Buddhist point of view considering goods as more important than people and consumption as more important than creative activity, is standing truth on its head. It means shifting the emphasis from the worker to the product of work, that is, from the human to the subhuman, a surrender to the forces of evil.

Schumacher completes the chapter by saying that it is in the light of both immediate experience and long-term prospects that the study of Buddhist economics could be recommended even to those who believe that economic growth is more important than any spiritual or religious values. For it is not a question of choosing between "modern growth" and "traditional stagnation". It is a question of finding the right path of development, the Middle Way between materialist heedlessness and traditionalist immobility, in short, of finding "Right Livelihood".

* * * * *

Although I believe E.P. Schumacher subtly implies that Japan has adopted modern economics and all its evils, I would like to postulate that Japan, especially in the past ten years, has both consciously and subconsciously sought the Middle Way in economics. Since Schumacher's book was published in 1973, more information has been made available about Japanese business approaches.

One of Japan's greatest strengths is her adaptability. Going from the Tokugawa feudal period to the Meiji Restoration to defeat in World War II to economic success in such a relatively short period of time is testimony enough of Japan's adaptability. Faced with keen competition from the U.S. and Western Europe in seeking a place in world trade presented yet another challenge to her adaptability; namely, how to modernize and yet remain committed to traditional spiritual and religious values. Even though the over 150,000 temples and shrines throughout Japan are no longer attracting the religious practitioners they once did, Buddhist philosophy as a way of life is alive and well. One needs only to tour Toyota, Honda, Matsushita (Panasonic) or other large corporate institutions to see it thrive.

Buddhist economics can be seen in manager-labor relations, in co-worker relations, in the myriad of fringe benefits the company provides for all its workers which, by the way, some American economists have labeled "obsessive". Are Japanese corporations obsessive about their employees? Hardly; they just see the true value of work in a more Buddhist mode. That is not to say that these highly competitive organizations have not used modern technology--in some areas they lead the world technologically.

The difference between a corporation such as Toyota and a corporation such as General Motors is that Toyota does not push its technology to the full extent at the expense of its employees. For example, robots are used in areas such as

welding to protect the employee from dangerous jobs rather than to replace the employee. At General Motors the main focus of robotization has not been worker safety as much as it has been to reduce labor/production costs thus resulting in job eliminations.

Can Buddhist economics work in a Judeo-Christian culture that has lost much of its spiritual and religious value structure? I think so. Some large American corporations have been "Buddhist" for a long time. To name a few there are I.B.M., Intel Corp., Hewlett-Packard, Proctor & Gamble and Kodak.

Why has Japan been able to adapt to a post-industrial society and still remain true to her Buddhist heritage while the United States has lost much of its Judeo-Christian heritage (which has many similarities to the Buddhist approach to life)? The answer to that would require more space than available here and a careful study of the history of both cultures. What are more important questions to pose at this final junction of the essay include: (1) Will the United States be able to look to its spiritual/religious past and find its own Middle Way or will we plod into an even more alienating future where man's value in life is replaced by the desire to accumulate great profits? (2) Will Japan be able to maintain the Middle Path in the future or will her citizens succumb to consumer materialism, profit motive and modern economics?

The United States has been an acknowledged important teacher to Japan over the past thirty years. It is now time for the teacher to become the student--not to copy but to understand the theory of Buddhist economics and adapt it to our culture. The United States is on a threshold of either a humanly profitable future or a humanly painful future. Either way, it won't be easy.

JAPANESE INFORMATION INVENTORY

PURPOSE

This module is a simple survey to determine what the student already knows about Japan. If the class has already had some instructional background on Japan's social, economic and political characteristics, the inventory could be omitted. If this unit is going to be used as a "springboard" into a unit on Japan, however, the inventory should be used for teacher assessment and to stimulate student curiosity.

PROCEDURE

1. Provide reproduced copies for students to complete for homework several nights before the *unit* is to be started.
2. Collect inventories the next day and compile a list of false images your students have about Japan. Save inventories for possible use in culminating activities.
3. Based on the false images students have, assign some background reading from their text or other information you might have. The Japan Information Agency's JAPAN TODAY sheets are very good.

JAPAN INVENTORY

NAME _____

PART I: Answer the following questions as either true or false.

- _____ 1. Japan is a country made up of many islands.
- _____ 2. The major occupation of Japan is agriculture.
- _____ 3. The major topographical feature of Japan is mountains.
- _____ 4. Japan has a high standard of living.
- _____ 5. Most Japanese live in villages without the benefit of electricity and modern conveniences.
- _____ 6. The Japanese are ruled by a dictator-emperor.
- _____ 7. Japan is a communist country.
- _____ 8. Japan is famous for selling cheap goods on the world market.
- _____ 9. The Japanese are able to sell cars for less than American cars because workers are paid lower salaries in Japan.
- _____ 10. People walk around Japan wearing kimonos and other traditional clothes that have been worn for several hundred years.

PART II: List as many Japanese products and their brand names (if possible) as you can.

PRODUCT

BRAND NAME

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

(use back of sheet if you know of more products)

JAPAN THROUGH CHARTS & GRAPHS

PURPOSE

To begin to develop a generalized picture of the Japanese economy and the role of the Japanese worker, the student should start to collect knowledge of Japan's economy and the role of the auto industry. The student is not only asked to read and interpret the data on the charts and graphs but in some cases to combine information or speculate implications.

PROCEDURE

1. Reproduce the charts and graphs so that each child can be presented with one set of data.
2. Ask students to individually answer questions accompanying the data. (Could be completed for homework).
3. Have students who have analyzed Set I compare results. Do same for Sets II-V at the same time (group work).
4. Once the entire group has agreed on one set of answers for their charts and graphs, they should compile a list of statements they can make about Japan to give to the rest of the class.
5. Each group should report their list of statements and the teacher should record them on board, chart or overhead projector. Save list to be edited at a later date (if any of their statements are false) or correct false statements at this time..

NOTE:

Each set has a different focus and some sets are more difficult to interpret than others. The less experience students have had in analyzing charts and graphs, the more time the teacher will have to devote to helping the groups develop their lists.

SET I: JAPANESE WORKERS

SET II: JAPANESE WORK ATTITUDES

SET III: THE ROLE OF AUTOS IN JAPAN'S ECONOMY

SET IV: JAPAN COMPARED TO OTHER AUTO PRODUCING COUNTRIES

SET V: JAPAN'S INVOLVEMENT WITH FOREIGN COUNTRIES AND
AUTO COMPANIES

I-1

AVERAGE ANNUAL EARNINGS OF REGULAR EMPLOYEES - 1980

<u>SEX</u>	<u>CONTRACT PAY</u>	<u>BONUSES</u>	<u>TOTAL ANNUAL EARNINGS</u>
MALES	¥2,724,264	¥986,352	¥3,710,616
FEMALES	1,486,560	510,204	1,996,764

Note: ¥200 = \$1 U.S.

1. Convert the above table into American dollars:

Male Pay _____ Female Pay _____

Male Bonus _____ Female Bonus _____

Total _____ Total _____

2. What might be some reasons for lower female salaries and bonuses?
3. What percentage of the contract pay is the bonus for males?
For females?
4. What might be the basis for determining the bonus amount?
5. What might be the reasoning behind having a bonus system?

I-2

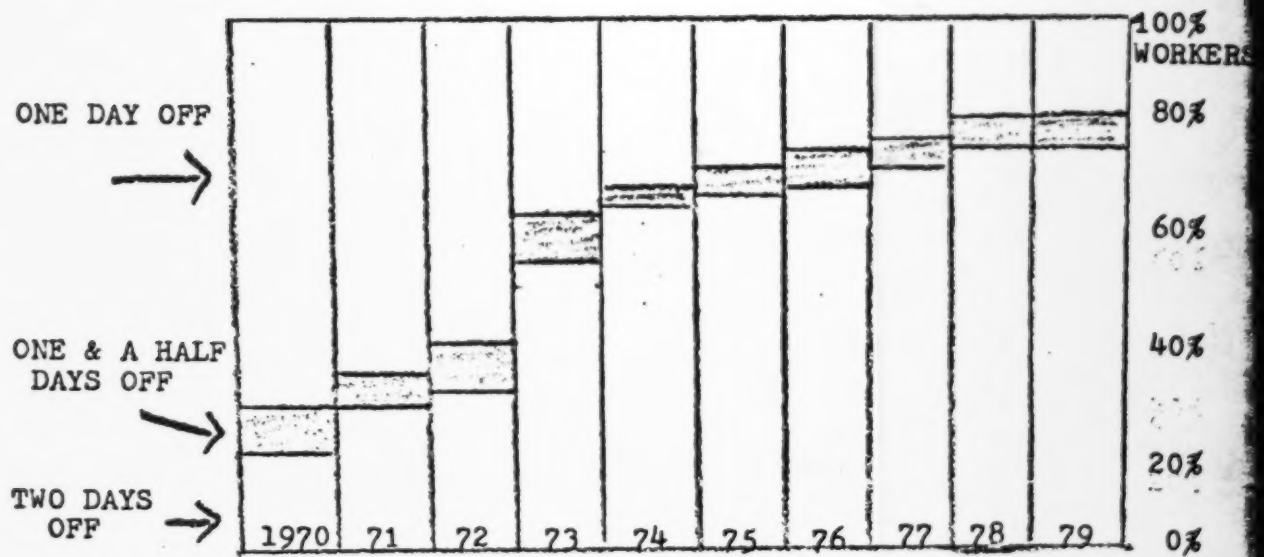
LABOR DISPUTE PARTICIPANTS & DAYS LOST - 1977-1978				
(in thousands)				
COUNTRY	# OF WORKERS		DAYS LOST	
	1977	1978	1977	1978
U.S.A.	2,040	1,600	35,822	39,000
ITALY	13,803	8,774	16,566	10,177
U.K.	1,166	1,042	10,142	9,405
FRANCE	1,920	705	3,666	2,200
JAPAN	692	660	1,518	1,358
West Germany	34	487	24	4,218

SOURCE: Bank of Japan, Comparative International Statistics, 1980.

1. Which country had the most workers and days lost in labor disputes in 1977? In 1978?
2. Which country had the least workers and days lost in labor disputes in 1977? In 1978?
3. How does Japan compare to the rest of the countries on this chart?
4. Speculate as to the causes of labor disputes in the U.S. and other countries?
5. Speculate as to why Japan's disputes are relatively low.
6. Does not knowing the total number of workers in each of these countries affect your interpretation of this chart? Explain.

I-3

FIVE DAY WORK WEEK SYSTEM IN JAPAN



1. Summarize the message of the above graph in one sentence.
2. Speculate as to the major reasons for such a marked increase of a 5 day work week between 1970-1979.
3. Speculate as to why the increase from one day to two days off was greater between 1970-1974 than 75-79.
4. What might this graph imply about work attitudes changing in Japan?

DEVELOPMENT OF EMPLOYEES' SUGGESTION SYSTEMS

	<u>1973</u>	<u>1976</u>	<u>1979</u>
No. of Companies Responding	141	222	372
Total No. of Employees	769,764	1,243,971	2,006,680
Rate of Participation	59.7%	56.6%	59.7%
Total No. of Suggestions	3,321,655	5,766,669	13,499,129
% of Suggestions Accepted	68.0%	67.9%	70.0%
Average Payment per Suggestion (¥200= \$1.00)	374	443	505
Highest payment for single suggestion (¥ 1,000)	1,122,500	300,000	700,000

1. What does the above table indicate about the popularity of having suggestion "boxes" in company factories and offices?
2. Do all employees participate in making suggestions?
3. Do you think money is the reason people make suggestions? Explain.
4. Speculate as to why the payment for the best suggestion was much higher in 1973 than in 1976 and 1979.

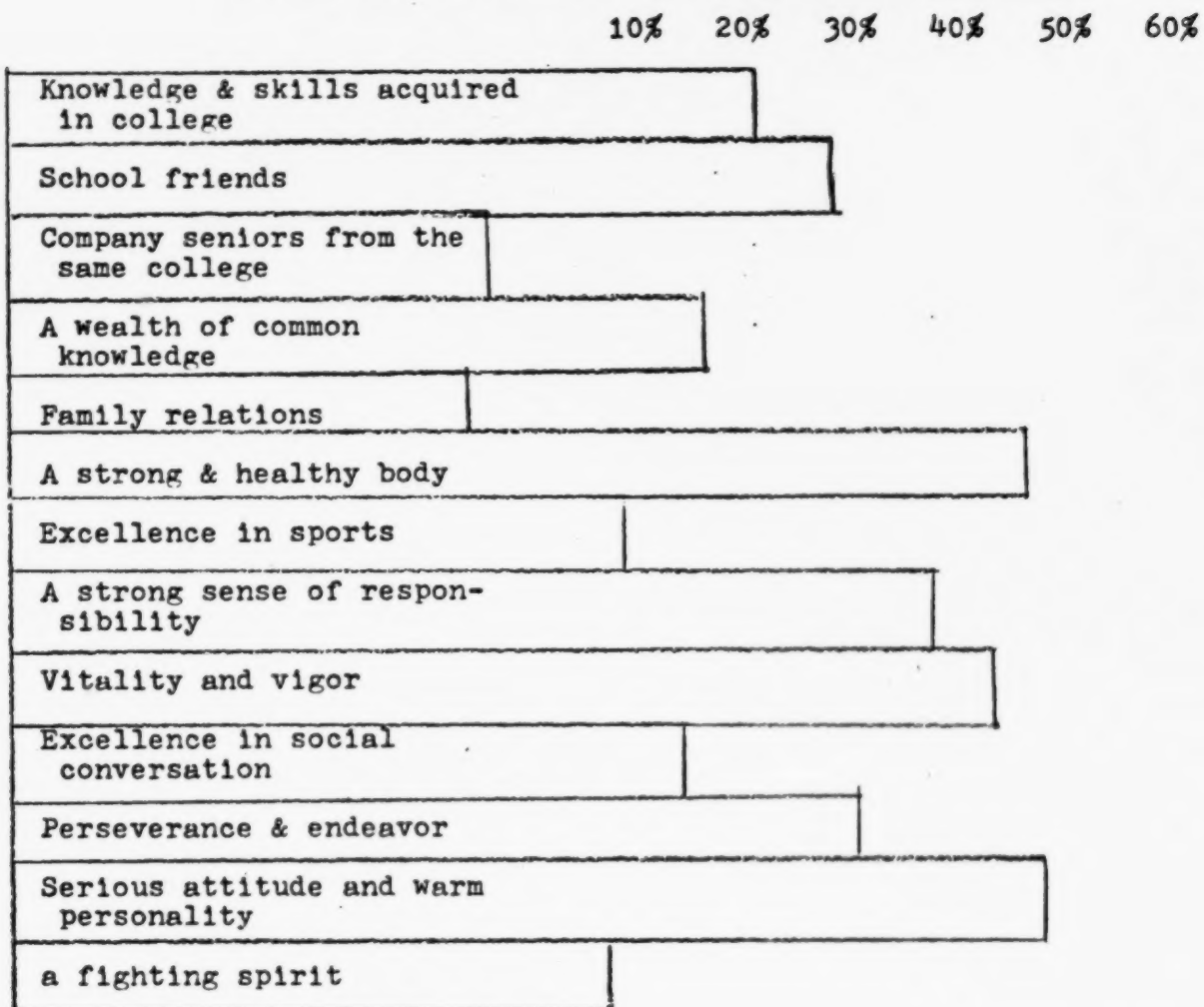
II-1

	<u>ATTRIBUTES OF DESIRABLE JOBS</u>							
	<u>BY SEX</u>		20-24	25-29	<u>BY AGE</u>			
	MALE	FEMALE			30-34	35-39	40-49	50-59
HIGH WAGES	16.5	13.7	14.7	15.4	15.2	14.5	17.2	14.3
LIFETIME EMPLOYMENT	21.1	14.3	11.7	13.7	12.9	17.0	20.7	20.4
SHORT WORK HOURS	4.1	14.4	7.3	10.6	9.6	9.4	9.2	9.6
PROMOTIONS	2.9	1.2	0.7	3.5	1.9	2.2	2.4	0.9
FULLY USING ONE'S CAPABILITIES	42.1	28.0	42.3	38.0	39.9	37.8	32.9	32.9
ENJOYING CO-WORKERS	7.3	22.6	20.0	15.9	16.2	12.5	12.0	14.1
MEANINGFUL CONTRIBUTION TO SOCIETY	4.7	4.9	2.0	2.2	3.5	5.3	4.6	6.5

1. Which is the most important attribute for Japanese males?
2. Which is the most important attribute for Japanese females?
3. Compare the top three male attributes with the top three female attributes. What might be some reasons for the differences?
4. At which age range are high wages most important? Why might that be?
5. At which age range is fulfilling one's capabilities most important? Why might that be?
6. At which age range is making a meaningful contribution to society most important? Why might that be?

II-2

WHAT IS ESSENTIAL FOR LIFE IN THE BUSINESS WORLD?



1. Re-order the above factors from highest to lowest in importance. (attach a number in front of each characteristic)
2. Which two factors are viewed by Japanese as being most important?
3. Which two factors are viewed by Japanese as being least important?
4. How do you think American would respond to this chart? Why?
5. How would you respond to this question?

II-3

JAPANESE WORK ATTITUDES SURVEY

WHEN DO YOU FIND YOUR WORK WORTHWHILE?

	<u>TOTAL</u>	<u>MALE</u>	<u>FEMALE</u>
NUMBER OF RESPONDENTS:	1,315	890	425
When I have accomplished a task on my own	28%	31%	20%
When I have a good superior	2%	2%	1%
When my work is acknowledged as important	10%	9%	13%
When I am allowed to assume responsibility for work	14%	15%	11%
When I have thought up a new method	1%	2%	0%
When I feel myself making progress	7%	8%	5%
When my work is interesting	15%	13%	19%
When I get along well with my fellow workers	9%	7%	13%
When I am working in a pleasant environment with a good salary and good facilities	1%	1%	2%
When I get a promotion	1%	1%	0%
When my company is doing well	1%	1%	0%
Others	1%	1%	2%
No time in particular	8%	7%	10%
Don't know	2%	2%	4%

1. What was the largest response from males in this survey?
2. What was the largest response from females in this survey?
3. Compare responses of 10% or more between males and females. What might account for the differences?
4. Which reasons are least important for both males and females? Speculate as to why this is so.

III-1

COMPARISON OF JAPAN'S AUTOMOBILE MANUFACTURERS, 1979	
(unit: \$ mil.)	
TOYOTA	14,548
NISSAN (DATSUN)	12,079
HONDA	4,716
TOYO KOGYO	4,547
MITSUBISHI	3,983
ISUZU	3,033
FUJI	1,803
HINO	1,609
SUZUKI	1,522
DAIHATSU	1,461
NISSAN DIESEL	1,100

1. Which automobile company made the most money in 1979?
2. How many of the auto companies listed above have you ever heard of? Did you know they were Japanese?
3. Why do you think Toyota and Nissan have sales much greater than the rest of the companies?

III-2

TOP 10 JAPANESE INDUSTRIES---PRODUCTION-1979
(unit: \$ mil.)

1. Transportation Machinery & Equipment Manufacturing (Auto & related parts)	97,940
2. Food Manufacturers	92,661
3. Electrical Machinery & Appliances Manufacturers	84,958
4. Steel & Iron Manufacturers	72,007
5. General Machinery & Equipment Manufacturers	70,180
6. Chemical Industry	69,095
7. Petroleum & Coal Products Manufacturers	45,609
8. Metal Products Manufacturers	43,579
9. Textile Industry	34,207
10. Glass & Ceramics Manufacturers	32,815

1. Which of the ten industries listed are directly connected to the success of transportation and equipment manufacturing?
2. If sales were to decrease in the transportation and equipment manufacturing category how would it affect some of the other top 10 industries?
3. Speculate why textiles, glass and ceramics, object Japan has been historically noted for, are so low on the top 10 scale.

III-3

OWNERSHIP OF PRINCIPAL CONSUMER GOODS IN JAPAN - 1979

PRODUCT	% OF OWNERSHIP
1. Refrigerators	99.1%
2. Washing machines	99.0
3. Color televisions	97.8
4. Electric fans	95.9
5. Vacuum cleaners	95.7
6. Electric "Kotatsu" footwarmers	92.9
7. Petroleum stoves	92.2
8. Sewing machines	84.0
9. Stainless steel sinks	82.2
10. Cameras	82.2
11. Bicycles (adult size)	77.6
12. Gas water heaters	75.6
13. Carpets	68.9
14. Tape recorders	60.5
15. Table and chair sets	58.1
16. Stereos	56.5
17. Automobiles	54.6
18. Western-style beds	44.5
19. Living room furniture sets	39.0
20. Room air conditioners	35.5
21. Electric kitchen ranges	30.6
22. Black and white televisions	26.9
23. Motorcycles, motor scooters	23.6
24. Pianos	15.5
25. Hot air heaters	13.4

1. Divide the chart into more than 50% and less than 50%-- are there more items in the above 50% or below 50%?
2. What does the answer to #1 tell you about the standard of living in Japan? The cost of living in Japan?
3. Compare the items in the top 50% with the items in the bottom 50%. Which half of the chart probably costs the consumer more?
4. Virtually all the households of Japan own the top three products on the chart. Speculate why for each of them.
5. Less than 25% of the population consumes the last three products on the chart. Speculate why for each item.
6. Automobile consumption is just above 50%. Speculate why it isn't higher since auto sales are #1 on Chart III-2.

TOP FIVE TOYOTA EXPORT COUNTRIES

(vehicle units)

YEAR

1976	U.S.A.	441,841	Australia	87,638	Saudi Arabia	86,981	Belgium	37,879	Canada	33,815
1977	U.S.A.	561,410	Saudi Arabia	108,694	Australia	86,872	Belgium	36,887	Canada	35,687
1978	U.S.A.	570,049	Saudi Arabia	110,598	Australia	87,056	West Germany	37,573	South Africa	37,558
1979	U.S.A.	617,383	Saudi Arabia	107,747	Australia	44,567	West Germany	41,666	U.K.	36,230
1980	U.S.A.	704,587	Arabia	128,310	Iraq	59,685	Canada	58,242	West Germany	57,642

1. Circle the region of the world which purchased the most Toyotas in 1976:

North America Europe Australia Middle East

2. Which region of the world is rapidly becoming the second largest purchaser of Toyotas?

North America Europe Australia Middle East

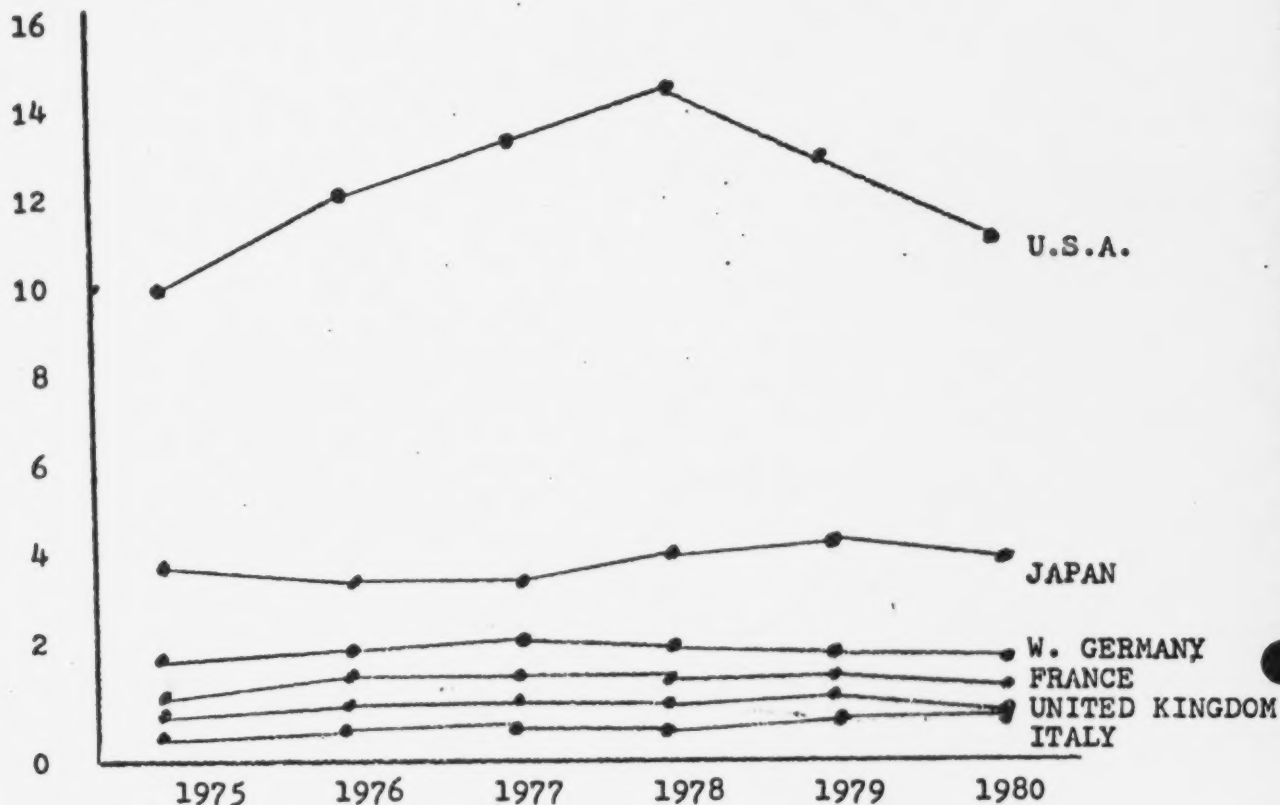
3. Which countries are the newest top 5 consumers of Toyotas? Speculate why each of these countries is buying more Toyotas.

4. Which country has almost doubled its consumption of Toyotas in the past 5 years?

IV-2

TRENDS IN NEW REGISTRATIONS OF MOTOR VEHICLES IN SELECTED COUNTRIES

(unit: mil. vehicles)

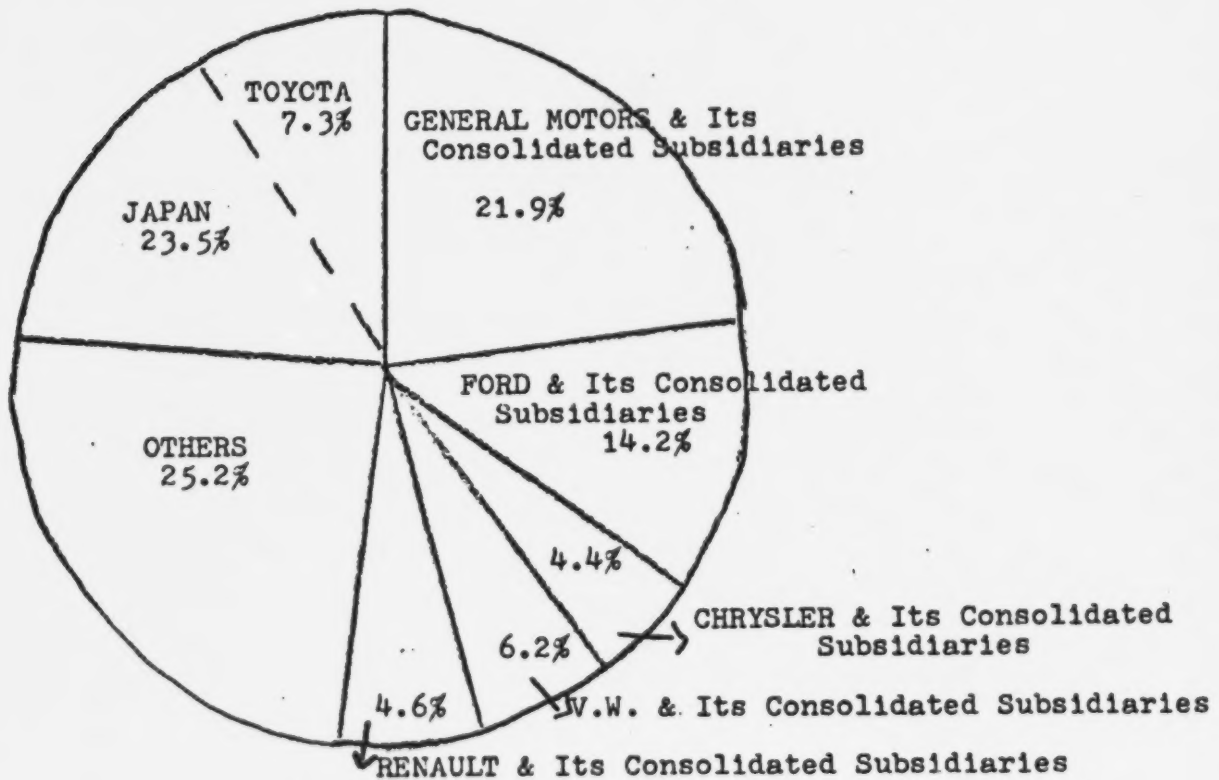


1. Which country registered the most automobiles overall?
2. Which country registered the least automobiles overall?
3. Which country experienced the greatest decrease in auto registrations between 1978-80?
4. Has any country increased its registration of automobiles between 1975-1980? If so, which one(s)?
5. Speculate why auto registrations have generally decreased or remained steady between 1978-80.
6. Is there any relationship between population size and the units measured on this graph? Explain.

IV-3

COMPARISON OF JAPANESE AND SELECTED FOREIGN AUTO MANUFACTURERS

World Production of Motor Vehicles: 1979



1. Which single company controlled the largest share of production in 1979?
2. What is the total % of world production controlled by American auto companies?
3. Look at chart IV-4. Which cars would be included under "OTHERS"?
4. If American companies produced over one third of the world's production of autos in 1979, what has happened since then to weaken the U.S. auto industry?

IV-4

WORLD AUTO MANUFACTURERS - TOP TEN IN SALES - 1979		
(unit: \$ mil.)		
GENERAL MOTORS	SALES	66,311.2
	ASSETS	32,215.8
FORD	SALES	43,513.7
	ASSETS	23,524.6
FIAT	SALES	18,300.0
	ASSETS	N.A.
PEUGEOT-CITROEN	SALES	17,270.1
	ASSETS	12,273.5
VW	SALES	16,765.7
	ASSETS	12,653.9
RENAULT	SALES	16,117.4
	ASSETS	N.A.
DAIMLER-BENZ	SALES	14,942.3
	ASSETS	8,178.7
TOYOTA	SALES	14,012.3
	ASSETS	6,613.3
NISSAN/DATSUN	SALES	12,652.1
	ASSETS	10,011.9
CHRYSLER	SALES	12,001.9
	ASSETS	6,653.1

1. On graph IV-3 Japan is shown as producing 23.5% of world auto production in 1979. Speculate why Toyota and Nissan are ranked as 8 and 9 on this sales chart.
2. Which auto manufacturer did the poorest in sales in 1979?
3. Which auto manufacturer realized the least profit in 1979? Speculate where the money went between sales profits and company assets.

OVERSEAS ASSEMBLERS AND MANUFACTURERS FOR TOYOTA VEHICLES - 1979

COUNTRY	LOCATION	STARTED OPERATION	PRODUCTS
U.S.A.	Long Beach, Cal.	1974	Truck cargo beds for Hi-Lux
Brazil	Sao Paulo	1958	Land Cruiser
Venezuela	Paro Negro	1963	Land Cruiser
Costa Rica	San Jose	1964	Starlet
Peru	Lima	1967	Corona
Trinidad	Port of Spain	1971	Crown, Cressida, Corolla, Hi-Ace, Land Cruiser
Portugal	Vila Nova de Gaia	1968	Corona, Corolla, Hi-Ace, Land Cruiser, Dyna
Ireland	Dublin	1973	Corolla
Philippines	Manila	1961	Crown, Cressida, Corona, Corolla, Hi-Ace, Hi-Lux, BUV, Land Cruiser, Toyota Truck
Thailand	Bangkok & Samutprakarn	1964	Crown, Corona, Corolla, Hi-Lux, Dyna
New Zealand	Christchurch	1966	Corona, Land Cruiser, Hi-Ace, Cressida, Corolla
	Thames	1968	Starlet, Hi-Ace
Malaysia	Selangor	1968	Cressida, Corona, Corolla, Hi-Ace, Hi-Lux, Toyota Truck, Land Cruiser
	Serawak	1978	Crown, Corona, Corolla, Hi-Ace, Land Cruiser, Dyna, Toyota Truck, BUV, automotive parts
Indonesia	Jakarta	1970	Land Cruiser
	Jakarta	1976	Hi-Ace
Pakistan	Karachi	1970	Cressida, Corona, Corolla
	Karachi	1973	Hi-Ace, Land Cruiser, Dyna, Stout, Toyota Truck
South Africa	Durban	1962	Hi-Lux, Stout, Land Cruiser, Toyota Truck
Kenya	Mombasa	1977	

PASSENGER CARS: Crown, Cressida, Corona, Corolla, Starlet

VANS & WAGONS: Dyna, Hi-Ace

TRUCKS: Toyota Truck, Dyna, Stout, Hi-Lux, Hi-Ace

FOUR-WHEEL DRIVE VEHICLES: Land Cruiser, Hi-Lux

1. Which are the three oldest Toyota overseas plants? What might these plants and their locations have in common?
2. Which regions of the world is Toyota concentrating on most for overseas plants?
3. Speculate why there are so many Toyota overseas plants.
4. Toyota advertises as a "world car". How does this chart support that label?
5. Speculate why some countries import one one type of Toyota vehicles while others assemble a wider variety.

V-2

FOREIGN AUTOMOBILE MANUFACTURERS IN JAPAN - 1980

June, 1971	Chrysler acquired 15% of Mitsubishi Motor Co.
Sept., 1971	General Motors acquires 34.2% of Isuzu (Subaru) Motor Co.
Jan., 1974	Ford establishes Ford Motor Company (Japan) as wholly-owned subsidiary.
Sept., 1974	Volvo establishes Teijin-Volvo with 50% participation.
May, 1976	General Motors acquires 51% of Isuzu Finance Co.
April, 1977	British Leyland establishes Japn-Leyland with 35% participation with Mitsui & Co. providing 65%.
Nov., 1979	Ford acquires 25% of Toyo Kogyo (Mazda).

1. Which countries hold part ownerships in Japanese automobile companies?
2. Which U.S. companies hold part ownership in Japanese auto companies?
3. Speculate why U.S. companies have purchased stock in Japanese auto companies.
4. Speculate as to what effects owning stock in Japanese auto companies might have on the U.S. autoworker.

V-3

NUMBER OF IMPORT/SALES COMPANIES AND SALES/SERVICE OUTLETS
JAPAN - 1980

COUNTRY	MAKE	IMPORT/SALES COMPANIES	SALES/SERVICE OUTLETS
West Germany	Audi-NSU	2	113
	BMW	1	3
	Daimler-Benz	3	117
	Ford (Fiesta)	2	2
	G.M. (Opel)	3	6
	Porsche	2	10
	VW	2	113

United States	Chrysler	9	12
	Ford	17	42
	G.M.	23	303
	Avanti	1	0

United Kingdom	Aston Martin	1	-
	British Leyland	5	27
	Ford (Cortina)	2	2
	Lotus	1	1
	Morgan	1	1
	Rolls-Royce	1	3
	Panther	1	-

Italy	Alfa-Romeo	2	6
	Fiat	2	6
	Ferrari	1	3

Sweden	Saab	1	10
	Volvo	1	14

France	Citeroen	1	10
	Peugeot	1	10
	Renault	1	-

1. Which country has the most sales/service outlets in Japan?
2. Which company has the most sales/service outlets in Japan?
3. Summarize what kinds of European autos are purchased by Japanese consumers.
4. Which region of the world probably sells more cars to Japan? Europe or U.S.A.
5. Speculate why American auto companies appear listed under several other countries.

TOYOTA SPIRIT AND IDEAS

PURPOSE

The attached statements reflect the corporate spirit originally spoken by Sakaichi Toyoda (1867-1930) and his son Kiichiro Toyoda (1894-1952). By analyzing these fifteen statements the student should be able to (1) learn about the Toyota Motor Company philosophical framework, (2) have an opportunity to experience a problem solving activity by converting theory into practice and (3) be exposed to primary source material.

PROCEDURE

1. Explain that the attached statements are the philosophy of the founders of Toyota Motor Co. Divide class into teams of 4-5 students and inform them that as members of a managerial team they have been given the task of setting up a new plant for the production of automobiles.
2. Their particular task is to design a company policy that will reflect the company philosophy--in other words, put theory into practice.
3. Once the quotations have been read and discussed in groups, each group should examine the following topics in drawing up their company policy: Working Conditions, Wages & Salaries, Fringe Benefits, Work Attitudes, Promotion Policies, Training Programs, Lay-Off Policy, Work Incentive/Inventiveness.
4. Each team will be expected to present their plans to the rest of the class. Be prepared to defend your position--other class members may disagree with certain groups.
5. Optional: class could vote as to which group designed the best company plan or all the plans could be synthesized into one plan.

The following statements reflect the corporate spirit originally spoken by Sakaichi Toyoda (1867-1930) and his son Kiichiro Toyoda (1894-1952).

1. DO NOT FEAR FAILURE

There have been many twists and turns in my life; many battles hard fought and skirmishes half won. For the most part, there have been more failures than successes.

Try never to make the same mistake twice.

Do anything you want. But remember that you ultimately bear the responsibility for your actions.

2. PRACTICE OVER THEORY

I clearly remember an argument with my father about starting a new project. I was against the project, and I won the argument. But then my father asked me to give the project a try anyway, which I did. Much to my surprise, it turned out to be a great success. From then on I did less arguing and more practicing. Before you say you can't do it, try it!

My father also used to say "How can you expect to do your job without getting your hands dirty?" and "No engineer is worthy of the name who doesn't have to wash his hands at least three times a day!"

3. CONSTANT EFFORTS

I am not particularly blessed with any more creative talent than anyone else; what I have accomplished came from constant efforts. It upsets me when people ignore all my hard work and attribute everything to genius.

The most valuable quality for an inventor is the will to make constant efforts to achieve a single objective. Inventions are the children of these efforts.

4. CHALLENGE

It has been almost thirty years since Japanese companies began to make automobiles, but Japanese automakers have by no means reached the level of the United States, and we have much to learn. And yet the United States already looks upon us as a challenge. If the United States considers us a challenger, then certainly we must look at ourselves in that light, and demonstrate our abilities to the fullest. But in doing so we

must not just learn from others and copy them. That would merely result in being overwhelmed by the competition. We must produce superior automobiles, and we can do it with creativity, resourcefulness and wisdom--plus hard work. Without this creativity, resourcefulness, hard work and the willingness to face adversity, we will crumple and fall under the new pressures.

5. GOOD THINKING. GOOD PRODUCTS

"Good Thinking, Good Products" expresses the traditional spirit found within Toyota since the days of Sakaichi Toyoda. The most important quality we expect from Toyota workers is that they give full play to their creative inventiveness. Progress is made only through great effort--leading people by the hand does not make them creative.

After the Second World War, Germany was still undergoing tremendous reconstruction and development when I visited there. I toured many factories and was particularly impressed by the enthusiastic efforts being made to train young workers. The trainers and trainees all seemed acutely aware that the degree of development of industrial technology would be the determining factor in their country's future growth, especially since Germany has a scarcity of natural resources. They realized they had to be more creative than workers in other countries if they were to develop the technology needed to compete on world markets. But Japan is worse off than Germany. Japan is completely lacking in resources and is geographically distant from sources of raw materials. Even more so than the Germans, therefore, the Japanese must be creative, must refine their technology.

6. THE POWER TO THINK

Society has reached the point where one can push a button and be immediately deluged with technical and managerial information. This is all very convenient, of course, but if one is not careful there is a danger of losing the ability to think: we must remember that in the end it is the individual human being who must solve problems.

There have also been many advances in research and testing equipment, and it is now possible to obtain test data quite easily. But again, although there are advantages in being able to do things with less effort, there is also the danger of losing the ability to use one's own eyes and ears to make direct observations and to perceive fine points that do not always appear in data.

7. THE JOB SITE

Japan's reconstruction will be accomplished by engineers who are not afraid to get their hands dirty.

It takes at least three years of practical experience before a person can be called an industrial designer.

Scholars and engineers do not make automobiles. Workers do-- workers who learn technology and then apply themselves directly in sweat and grime to the job of producing cars.

As Kiichiro Toyoda told Shoichi Saito, who had then just joined Toyota, there was one quick way to learn about the business: "Go stand in the plant!"

8. WORK FORCE REDUCTION

If our new system is introduced successfully it will become possible when production is cut 30 percent, for example, to also reduce the work force for that production 30 percent. But if our workers are assigned to one fixed task it becomes impossible to shift them flexibly when production has to be cut. Only the introduction of flexibility into the assigning of work duties makes it possible to achieve a work force reduction in the real sense (without lay-offs).

9. BE WILLING TO MAKE AN ALL-OUT EFFORT

Toyota is in the auto industry, and naturally competitive auto-makers exist in many countries around the world. We can be successful at Toyota only when we do something better than our competitors or when we surpass the average for the industry. But if we are designing a new product, and know there is no room for failure, our attitude certainly must not be just to aim for the average--if we do that, we will surely fail. We must do our all-out best at such times, and allow ourselves no thought of losing.

In any company, of course, it is not possible to have everyone continually making an all-out effort, regardless of the consequences in exhaustion of resources, etc. But I think we always need a certain amount of this spirit. If, for example, 30 percent of our employees approach their work with this all-or-nothing spirit, perhaps 10 percent will be successful and produce something truly outstanding. Meanwhile, those who fail will learn from their experiences, and our company will continue to be able to produce superior products. The point is, we cannot aim only at what is the safe and completely acceptable thing to do.

10. TRY A HUNDRED TIMES

Whenever I ran into an especially knotty problem, I learned to turn my mind completely to it and make an even greater effort than usual to resolve it. If it meant running tests, I'd try a hundred times if necessary. Strangely, people generally give up trying to resolve a problem after they're already about 80% of the way toward success. But I've found that if you turn yourself completely to a problem, there's a good chance you will resolve it totally. That's why I like to stay with a problem to the end. It bothers me to think that if I give up halfway, all my efforts to that point will be for naught.

11. THE DOOR TO ALL WORK

Safety is the door to all work--be sure to pass through this door every day.

12. SHU * HA * RI

Kendo and the game of Go make use of the three basic concepts of Shu, Ha and Ri.

SHU means to absorb all the basic knowledge thoroughly.

HA means to try an approach different from the approaches one has used previously.

RI means to develop new approaches, which are uniquely one's own.

The same concepts can also be applied in work. Your minds should be flexible in order to absorb whatever new knowledge is made available. You should approach your work with a burning conviction to do well. And you should always seek to create products, with your own hands, which will be useful to society.

13. A PRODUCT APPROVED BY ALL

A product must be given full approval by all who use it, and afterward the engineer who produced it must check it completely again. Only then can he have any real self-confidence.

The strengths and weaknesses of an automobile are not found in catalogs. A driver can tell a good car by its feel. He can't be tricked. The car has to be good. Thus before marketing a car, we must test it and drive it under all possible conditions.

No matter what language a customer speaks, if he is provided with a car that is totally reliable and truly superior in every respect, he will recognize its worth--and he will give it his enthusiastic approval.

14. OPEN THE WINDOW

Open the window and look outside--It's a big world out there!

15. THE FIVE MAIN PRINCIPLES OF TOYODA

*Always be faithful to your duties, thereby contributing to the Company and to the overall good.

*Always be studious and creative, striving to stay ahead of the times.

*Always be practical and avoid frivolousness.

*Always strive to build a homelike atmosphere at work that is warm and friendly.

*Always have respect for God, and remember to be grateful at all times.

TOYOTA EMPLOYEE PROFILES

PURPOSE

The four profiles in this module are designed to:

- (1) provide the student with an opportunity to learn about real Japanese workers (names have been changed to respect privacy)
- (2) enable the student to compile a list of specific knowledge applicable to all Toyota workers and
- (3) enable the student to compare his/her company policy designed in the previous module with the management policies of Toyota.

PROCEDURE

1. Divide class into four groups--each group examines one of the four profiles (reproduce profiles)
2. Each group should compile a list of facts learned about workers based on the topics they used for designing a company policy: Working Conditions, Wages, Fringe Benefits, Work Attitudes, Promotion Policy, Training Program, Lay-Off Policy, Worker Incentives.
3. A speaker from each group should report to the entire class. Class should record additional information learned from the other three profiles. (Each profile reinforces some basic information but also introduces new information).
4. Students should compare what Toyota is offering its employees with what they were able to design in the previous module. Discussion might move in the direction of applicability to American businesses.

MINAKO HARADA

Assistant, Press Release Division--Public Relations Department

Female - Age 20

Minako is like many other young Japanese people, or for that matter young people all over the world. Graduating from a Liberal Arts Junior College with a degree in International Studies just four months ago, Minako embarked upon her first full-time job at the Toyota Motor Sales Company Public Relations office in Tokyo. Minako is quick to admit that she doesn't like working as much as she liked being a student. She finds it hard to wake up so early in the morning to commute 1½ hours by train from her home where she lives with her parents to the office in Tokyo. By the time she gets home at night she is tired and often lacks the energy to get involved in the neighborhood basketball and baseball teams she so enthusiastically enjoyed as a student. Like most young people, Minako looks forward to the weekend not only to be free from the pressures of work but also to enjoy dating and spending more time with friends and family.

At this point in her life Minako said she valued her family more than anything else. She also valued friendships, hobbies and leisure time more than her job. However, that does not mean that Minako hates her job. She does not think she will ever be as enthusiastic about working for Toyota as some of the older workers but her boss thinks that in time she will come to understand the work-place better and develop a joy in producing good work.

In an interview Minako made the following observations about her job. "If you have to work, and I feel I must to repay my parents for all the money they have spent raising and educating me, Toyota is a good company to work for. It is not easy to get a job here. Your grades must be good and your teachers must give you very good recommendations."

"Actually, I like many of the benefits of my job. I like meeting people from other countries and mostly I like the salary and other benefits that I gain as a Toyota employee. My monthly salary is ¥118,000 (\$590.00) basic, plus overtime, reimbursement for commuting expenses, bonus of approximately three months' salary given twice a year and being in a low tax bracket (less than 10%). Even though goods tend to be very expensive in Japan, especially clothing and cosmetics, I have plenty of money to spend on myself, give to my parents and save for my future."

"In addition to the financial benefits I get nine paid vacation days per year. If I want to I can save them up and use them together for a longer vacation in the future. Another benefit is the private recreation facilities Toyota has in Tokyo for its employees. I haven't spent much time there yet because I don't know too many people but there is a swimming pool and gymnasium at the center. This fall I plan to join a company basketball team. At the center you can also take a variety of courses. I plan to take a conversation course to better my English. Maybe then I'll be given more important work assignments.

I guess when you think about it Toyota is really good to its employees. Our cafeteria offers us a choice of at least five menus at a cost of less than 50% of what we would pay to eat out (\$.75 - \$2.00). There is a candy stand just outside the cafeteria which sells stamps, snack food, batteries, pens, and even panty hose. We don't get a discount on all items but it is very convenient to have these things readily available.

The company gives us 45 minutes for lunch but only a 15 minute coffee break in the afternoon at our desks. One nice thing, however, is that once a month we have a celebration in the cafeteria for those who have had a birthday during that month and a small gift is given by the company.

As a woman, Toyota gives me special treatment sometimes. If I have to work overtime they will provide me with taxi service door to door from the office to my home. There is also a work rule that no woman may work past 10 p.m. We are also allowed one sick day per month but are encouraged to not use them. Too many sick days can influence the amount of your summer and winter bonuses.

While attending college I had the opportunity to be an exchange student to the United States. I spent a year in Seattle. During that time I developed the idea that the American auto industry was the cause of many of its own problems. The companies seemed to experience many strikes and although the workers seemed positive toward their work, they were very unhappy. I don't think American auto workers have as many benefits as I do working for Toyota.

Oh well, I guess I should't complain about having to work a half day this coming Saturday. It only happens once every eight weeks. Furthermore, the following week-end is going to be great. Our whole department is going to one of the company lodges in the mountains. It is only going to cost us \$10.00 for the weekend; the company is picking up the other 80% of the bill. Although I'll be with my co-workers and we will probably talk "business" some of the time, the idea of the weekend is to relax and to get to know each other better as people!"

TADASHI SUGIYAMA

Assistant, Domestic Public Affairs Division--Public Relations Dept.

Male - Age 30

Tadashi and his wife Yukio live with their three year old son, Hirobumi in a company owned apartment that most of the young management employees refer to as "rabbit hutches". Although their apartment is small by American standards (a living/dining room area of approximately 10' x 12', two smaller rooms 8' x 12' and 6' x 10', a small kitchen and bathroom), in Japan where space is a premium, the apartment is considered average for a young couple.

Tadashi recalls that before he and his wife were married, he lived in the company dormitories and only had one room (8' x 10'). His rent, however, was only ¥ 1000 (\$5.00) per month, not including meals. Now he pays ¥7000 (\$35.00) per month for the company apartment not including utilities. Even though Tadashi and his wife sometimes think they are crowded in the company apartment, they need only to look at the apartment advertisements in the Japan Times newspaper to realize that a non-company owned apartment in a Tokyo suburbs would cost them ¥100,000 (\$500.00) per month. Because their housing costs have been so low, Tadashi and his family have been able to dress well, enjoy movies and other forms of entertainment in Tokyo that are costly and drive a new car (a Toyota, of course). They are also able to save a considerable amount of money for the down-payment on their dream house. Actually they like the exciting city life in Tokyo and would like to buy an apartment as close to the city as possible. They realize that it will take another five to seven years before they have enough money. Tadashi is eligible for the mortgage program offered by Toyota to all employees with at least five years of work experience. The longer a person works for Toyota and the more money he deposits in the company credit union, the greater amount he can borrow for a mortgage. Tadashi's goal is to save ¥2,000,000 (\$10,000) so that he can borrow ¥15 million (\$75,000) at a rate of 4.5% interest.

Tadashi and Yukio are well on their way to actualizing their home-owning goal. Although Yukio does not work but rather spends her days caring for their son and taking care of the apartment, she takes a keen interest in her husband's company. She is taking advantage of free courses offered at the company club. She is currently studying Ikebana (flower arranging). In addition, Tadashi, Yukio and their son enjoy swimming at the company recreation facilities. Hirobumi already knows how to swim thanks to an infant swim program his parents enrolled him in last year.

Tadashi feels he makes a good living for his family. His basic monthly salary is ¥220,000 (\$1100) plus he puts in about 40 hours per month in overtime at the rate of ¥1700 per hours (\$340 total). Like all other Toyota employees Tadashi looks forward to the summer and winter bonuses which in the past year have amounted to ¥1,400,000 (\$7000). In addition to these benefits, Tadashi is entitled to eighteen paid vacation days per year.

There is one complaint Tadashi has about the company, however. Tadashi is a graduate of Osaka University, one of Japan's finest schools. Yet when Tadashi was hired he was only offered a job at the very bottom of the management level. It is the policy at Toyota as well as most companies in Japan to start their workers at the bottom both in production and management and have them work up through internal promotions gradually. The company invests much time and money to train new employees. Tadashi was in a training program for almost a year before he was assigned to his first job. Since then he has been rotated to two other jobs at his level of management and has only experienced one promotion.

Tadashi does not expect another promotion for at least five years since the company is very slow to move someone up the ladder. This has sometimes been frustrating to Tadashi and his co-workers at the lower levels of management because they often deal with foreign, especially American, management people who are younger and have higher positions in their companies. However, Tadashi and his co-workers also realize that their American counterparts do not have the job security that they do at Toyota. Toyota has never laid off any of its employees, even in difficult times. As a result there have been no strikes in recent times for the workers realize that the company is doing its best to provide job security for all.

NOZOMU ARAKI

Production Assembly Line Worker

Male - Age 32

About thirty miles east of the city of Nagoya is Toyota City. Approximately 90% of the population of this city work at either the main headquarters or one of the eight plants located in or around the city. Nozomu Araki is one of those workers. Married, father of two children ages five and three, high school graduate and a good pitcher on one of the company baseball teams, Nozomu has worked for Toyota since graduating from high school 14 years ago.

If there is such a thing as a typical Toyota worker, Nozomu comes close to it. He has never worked for any other company and does not ever plan to. Since joining the company in 1966 Nozomu has grown along with the company. He remembers his first days of training and living at the company training center. That was when he was a bachelor. Nozomu met his wife, Kiko, at a company gathering. She worked as a typist in the parts inventory department. Nozomu worried a little about the financial responsibilities of supporting a wife. He was used to the low cost of living in a company dormitory (\$5.00 per month) and he had car payments. Even though his new Toyota was discounted about 20 per cent because he is an employee, he still had a large monthly payment.

Nozomu's fears were needless, however. Toyota helped this young couple out in several ways. First, they were able to hold their wedding reception at one of the company's gathering halls. In addition, each Toyota employee is presented with a gift of ¥10,000 (\$50.00) from both the company and the labor union upon getting married. Since Nozomu and Kiko were both Toyota employees, they received a total of ¥40,000 (\$200.00) which paid for most of their wedding reception. After a short honeymoon at one of Toyota's seashore resorts which cost them a good deal less than going to a commercial resort, Nozomu and his new bride settled into a small but inexpensive company apartment. Four years ago Nozomu and Kiko purchased a house in the suburbs of Toyota City. If it hadn't been for the 4.5% mortgage loan from Toyota they never would have been able to afford their new house because Kiko stopped working as soon as their first child was born.

Nozomu may be considered typical in other ways, too. He is hard working and is well liked by other men on the production line. Nozomu takes his job very seriously. He feels that he is truly part of the Toyota Motor Company and so what affects the company affects him. He values his job equally with his family and more than friendships, hobbies and leisure times. Of course Nozomu enjoys the 20 days of paid vacation he gets each year but he is

willing to work as much overtime as the company needs. He would not think of saying no. Although he enjoys his annual salary of ¥4.8 million (\$24,000) including bonuses, he enjoys his job because of the satisfaction and pleasure he gains from being part of a company that makes a world famous product. When people ask him where he works, he is proud to tell them "Toyota".

In Nozomu's spare time he has been interested in reading about his counterpart, the American auto worker. From articles appearing in Japanese and American magazines he has come to the conclusion that worker attitudes are not strict enough in the United States. He also thinks they have a more relaxed feeling about their jobs in America.

In a way Nozomu envies that relaxed feeling of his American counterparts. Not that the company puts pressure on Nozomu. Nozomu puts pressure on himself--what he calls "friendly competition" among workers. Everyone is expected to do the best he can. People who come up with creative new ideas that make production more safe or efficient are rewarded monetarily and are given an award at an annual banquet. In 1980 there were 860,000 suggestions proposed throughout the Toyota Company and 94% were implemented. Most ideas were not revolutionary but nonetheless useful in making the company a better, more efficient employer. Monetary rewards for these ideas ranged from ¥5000 to ¥200,000 (\$25 - \$1,000).

This friendly competition never turns into cut-throat competition, however, Nozomu says. Workers always work in teams. No one ever has the responsibility of doing a job all by himself. Older workers and younger workers are assigned to the same team so that the more experienced can help the new worker. As a matter of fact, everyone knows a new worker by the band on his hat. All production employees are provided with uniforms which the company pays for and cleans but new workers are also given black "baseball style" caps with green bands so that more experienced workers can identify them and be more helpful. There is a real sense of brotherhood on the assembly line. It is one for all and all for one. Although some may secretly feel jealousy when one worker is rewarded for a good idea, it is never admitted publicly. Instead, all are happy for the co-worker and congratulate him. That is the Japanese way! "And after all," Nozomu says, "someday I may come up with a good idea and my co-workers will be proud of me and I will be rewarded by Toyota for my hard work."

SHIGETO YAMADA

Production Assembly Line Worker

Male - Age 30

Shigeto started to work for Toyota twelve years ago after graduating from high school. At that time he was very interested in racing cars and was delighted to work for a company that produced any kind of automotive vehicle. He was also excited when he was able to purchase his first car, a Toyota, of course.

In the past twelve years Shigeto has followed a pattern that is similar for many young male employees at Toyota. Not originally being from Toyota City, Shigeto had to take a room in the company dormitory when he started to work. Eventually he met a young girl from Toyota City and they got married. They have one child, a boy, who is 18 months old. After marriage they moved into a company apartment which is small but costs them only 1/10 of what an apartment would cost in Toyota City. Shigeto spends his free-time playing baseball with his friends and neighbors (all Toyota employees) and taking his family on sightseeing excursions.

Shigeto's job is very important to him. Next to his family, it is more important than anything else. He likes having responsibility and the sense of accomplishment when he sees another new Toyota come off the line. Shigeto is well aware of the international reputation the Toyota cars have earned. He feels he can share in that sense of company pride. He also knows that the better the company does monetarily, the higher his bonuses will be. Currently Shigeto is earning about ¥4.2 million (\$21,000) annually.

Shigeto has a little more responsibility than most assembly line workers. He is a team leader. As such he is responsible for seeing to it that the nine other men on his team all work well together and avoid personal friction. One way that the Toyota company encourages workers is to hold "Q.C. Circle" meetings twice a month. A Q.C. Circle is a quality control meeting. The men in Shigeto's work team stay after work for about an hour or two twice a month to discuss ways of improving safety conditions along their part of the assembly line. For their efforts the company pays them overtime and will reward the entire team if they come up with some good suggestions, especially if their suggestions can be applied in all the ten Toyota plants.

Shigeto's feelings about being a team leader go beyond the hours he puts in with his team. He does not view himself as a boss but rather as an elder brother who has the responsibility of helping the rest of the team get along. To secure such a feeling Shigeto encourages the team to stop for a drink or two occasionally, to get together and work out at the company gymnasium and to participate in company picnics and outings. Shigeto believes that because his team knows each other fairly well, they work better together. When one man is having a bad day, the others will pitch in and help-- it's the total team effort that counts.

Shigeto's strong feelings for his company have influenced his opinion of American autoworkers. He thinks they should show more respect toward the company. Shigeto feels that each worker is part of the company and to not respect the company is to not have any self-respect. He views his company as a parent and himself as a child. If he loved the company it will take care of him.

Shigeto trusts that Toyota will do everything they can to provide him with life-long employment. Even in economically slow times the company has not had to lay off employees. When production is down workers are transferred to other line jobs so that they will not be sitting idle or layed off. Toyota has not over-hired in the past when production was high; instead they offered workers more overtime. Shigeto remembers how the workers almost went on strike in 1974. It was just after the country was feeling the effects of the 1973 oil crisis. Workers were affraid that there would be future lay-offs so they wanted to make up for it in higher wages. The company gave them an over-all increase of over 30% in wages but in exchange the entire company was asked to engage in an all out effort to conserve energy. That meant little or no air-conditioning, turning off machines and lights when not being used, etc. It worked--a strike was avoided, the workers received a considerable pay increase and the company was able to cut energy costs by more than 20%.

It is the combination of workers, managers and labor union all working together for the benefit of the entire company that makes Shigeto feel secure in his job. The open communication among the various groups within the company reinforce the company slogan: "Good Products from Good Thinking".

TOYOTA PLANT - TEAM WORK NETWORK

X = Individual Worker

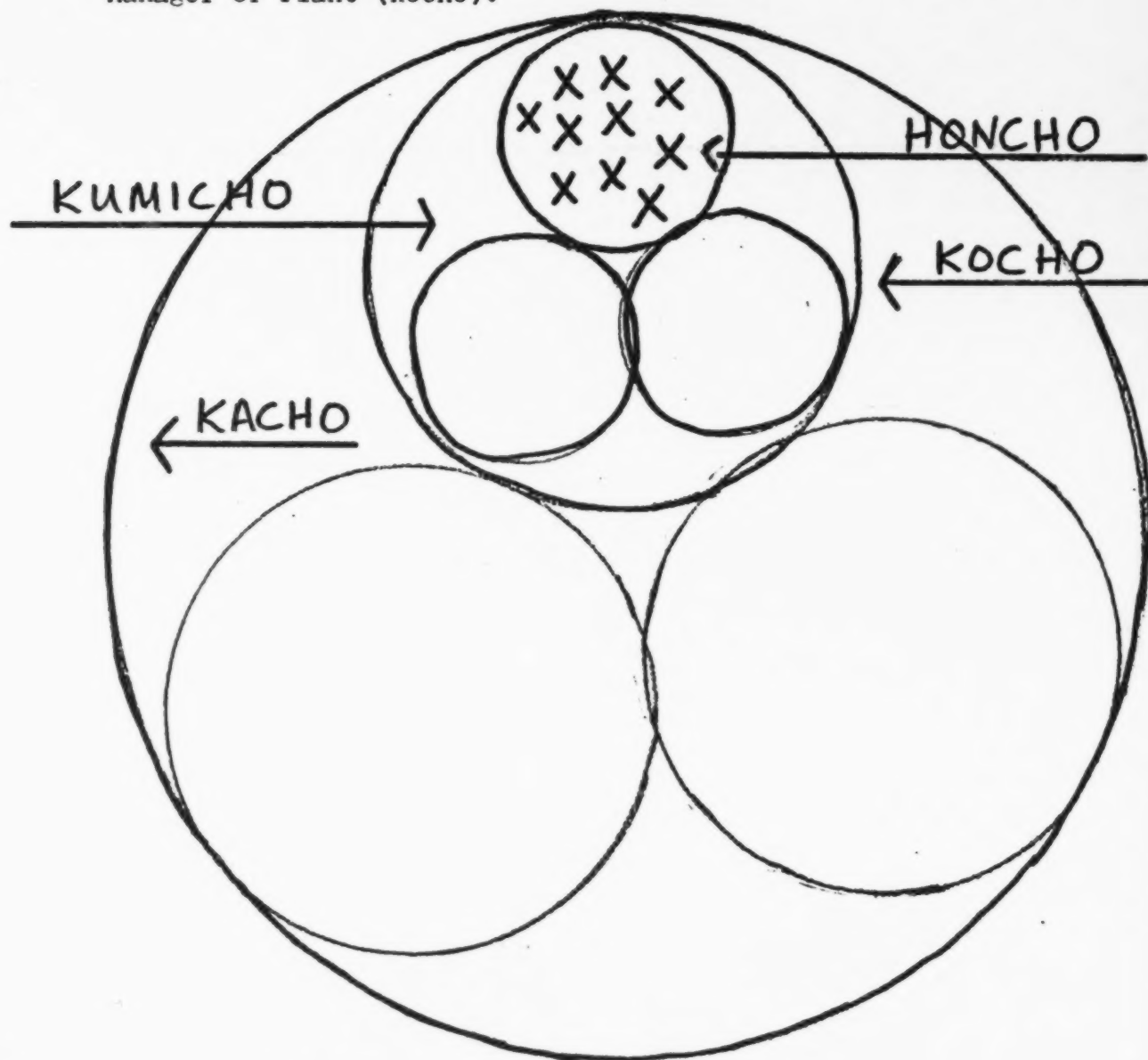
HONCHO - work team (5-10 workers) Q.C. Circle

KUMICHO - three-four work teams (15-40 workers) under
one foreman entitled Kumicho

KOCHO - several groups of Kumicho (80-100 workers) under
one supervisor entitled Kocho--usually several
Kocho per plant

KACHO - Plant Manager

Any shop worker can be promoted as high as Assistant General
Manager of Plant (Kocho).



CONCLUDING ACTIVITIES

PURPOSE

Through the modules the student has experienced a general exposure to Japan through previous instruction or some background reading as well as the chart and graph exercises. Then the student was given a more specific exposure to Japan through the Toyota Motor Company philosophy and worker profiles. The concluding activities is an attempt to return the student to the broad spectrum of Japanese economic and social success.

PROCEDURE

Activity I: Show the film entitled The Japanese, narrated by Edwin O. Reischauer. Even though it is over 10 years old it provides much to put this unit into perspective of Japanese society in general as well as contributing a bit of additional information about workers.

Activity II: Using student chart and graph summaries and Toyota employee profile analysis sheets as supportive evidence, ask students to test E.F. Schumacher's Buddhist economics thesis regarding the function of work summarized here:

1. to give man a chance to utilise and develop his faculties
2. to enable man to overcome his ego-centeredness by joining with other people in a common task
3. to bring forth the goods and services needed for a pleasant existence

Testing this thesis can be accomplished in a variety of ways:

1. oral discussion with entire class
2. preparation of theory/practice chart, individually or in groups
3. essay assignment - individually
4. unit test including specific questions reflecting information from the modules and an essay reflecting Schumacher's thesis or one designed by the teacher.
5. any combination of the above

CONTINUING ACTIVITIES

PURPOSE

This unit may be used as the first part of a comparative U.S. - Japan unit addressing itself to such topics as labor relations, world trade, social and psychological needs, U.S. auto industry problems, models for post-industrial management.

ACTIVITIES

1. Contact the following companies who have developed similar management policies and obtain brochures for students to examine and compare.

Proctor & Gamble
Intel
I.B.M.
Kodak
Hewlett Packard
2. Have students design an interview format and collectively gather data from American laborers or auto workers--which ever is most convenient in your community.
3. Have students contact local companies (large and small) to find out if they have a "quality of worklife program" and how it works.
4. Have students collect newspaper and magazine articles that show a Japanese management policy influence on American business. A recent magazine and T.V. commercial by Ford Motor Co. is a good example.
5. Students in a European Culture Studies course could compare Japan to European companies who have offices in the U.S. and have printed materials available.

6. Students could apply the Toyota Management Model to institutions they are part of: family, school, clubs, religion. How would these institutions change? Would a new model strengthen or weaken the existing institution?

POST SCRIPT

In accordance with the trends of the New Social Studies, this unit is designed not only to extend the American student's knowledge and understanding about Japan but also to help the student develop a variety of skills which include chart and graph interpretation, problem solving, group co-operation, reading and writing as well as thesis testing skills.

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Keeping Up With the Watanukis

YOKOSUKA CITY, Japan —Takashi Watanuki, 37, is a foreman at the sprawling Nissan auto company's Oppama assembly plant here, about 35 miles south of Tokyo, and close to the great Japanese port of Yokohama.

In contrast to many of his counterparts in U.S. auto factories, Watanuki is happy in his work, happy with his company, and is sharing with Nissan some of the benefits of the industry's enormous success.

He and his wife now own their own home—an attractive two-story, three-bedroom detached house, worth more than \$150,000, on a quiet street in suburban Yokohama—and are well on their way to becoming part of an increasingly affluent blue-collar class in Japan.

Watanuki owns a Nissan Sunny (the equivalent of a Datsun 210), which he drives to work and uses each summer on a nine-day holiday. Watanuki also has 1.5 million yen (about \$6,600) stashed away in a company savings ac-

See WATANUKI, G3



TAKASHI WATANUKI
... sharing in Nissan's great success

BEST COPY AVAILABLE Keeping Up With the Watanukis

WATANUKI, From G1

count against emergencies. He can work until age 60, and on retirement will be entitled to a lump sum payment of 11.9 million yen (\$52,300), the highest retirement allowance in the Nissan system.

Interviewed here and at his home—bought with the help of a large subsidized loan from Nissan—Watanuki appears to be a living symbol of the Japanese industrial success story: a productive worker with strong ties to "his" company.

Although Watanuki was hand-picked for the interview by Nissan, and spoke in the presence of both company and union representatives, he did not appear to be inhibited. For example, in response to questions, he felt free to express some "concern" that robots would eventually cause a loss of jobs at Oppama, which is less automated than the more famous Zama assembly plant nearby.

But so far, Watanuki said, the Oppama robots have been beneficial "because they replace difficult jobs and hard labor." He adds, however, that some of his coworkers are apprehensive about "Kumito," "Kuniko," "Miyako," and the other robots (all named for women). All told, there are about 100 Oppama robots (mostly doing spot-welding jobs) and 5,000 workers.

He knows that at Zama, where robots are performing more sophis-

ticated tasks such as installing doors, the expectations are that the human labor force, also about 5,000, will be cut in half in 10 years.

Watanuki started as a laborer at Nissan 20 years ago after graduating from high school. His total pay last year was about 6 million yen (including a bonus of about 1.5 million yen), equal to about \$26,375, or \$4,000 to \$5,000 over the average experienced worker's earnings. He said his taxes amounted to "a little over 10 percent" of his earnings.

He bought his house two years ago for 35 million yen (approximately \$150,000) with the help of a 15-million-yen loan from the company (\$66,000) at less than 8 percent. The company loan system is part of a home-ownership scheme used by most major Japanese companies, which encourages regular savings deposited with the company (the interest paid is somewhat more generous than paid by Japanese banks). The Nissan company's individual housing loan limit is 20 million yen (\$88,000).

Watanuki told me that the cash for his house above the Nissan loan (which is to be paid back over 20 years, primarily out of his regular bonuses) came from savings, and from the profit on the condominium he had owned for the prior five years, also partially financed by Nissan. "It's a luxury to own a home," says Mrs. Watanuki over tea, admitting that their payments don't allow

them to splurge on too many other things.

The Watanuki house is neatly, if a bit sparsely, furnished. There are hardwood floors throughout the Western-style house, which has a traditional Japanese-style room. Mrs. Watanuki's parents have one of the three bedrooms, the two Watanuki children share another with built-in bunk beds. The kitchen is modern, complete with gas stove and a microwave oven. There are two television sets, including a handsome Sony console, and the hall foyer displays Watanuki's golf clubs.

Watanuki, who also plays mahjong, smiles when a visitor spots the golf bag. "We've made up a club at the shop," he grins, "and twice a year we have a competition."

Talking about the success of Japanese cars in world markets, Watanuki, a foreman for the past 15 years, said, "I am not sure why the quality is better, but we have the choice to compete, and I do my best in that effort."

He did not want to get into a discussion of how his pay compares with American standards. "Our pay is more than enough," Watanuki said, "and that is made possible by our exports." Would he rather have more cash and fewer fringe benefits, something closer to the American system? "I prefer the present arrangement, because it makes it easier for the working environment," Watanuki said.

— Hobart Row

Dormitory Life Suits Bachelor At Nissan

YOKOSUKA CITY, Japan — Within an hour's drive from Nissan's Oppama assembly plant here, the company maintains five dormitories for more than 2,000 male workers, and a smaller facility for 16 women. These low-rise, simple accommodations are available to unmarried Nissan workers for up to 10 years, or until they are 28 years old, but it is such a good deal that many hate to leave.

One of these men is Hideoyoshi Miamoto, 27, a tall, dark native of Hokkaido who is a vehicle tester at Oppama. Miamoto has already spent nine years—three years more than the average stay—in one of the Nissan dormitories, and is senior enough there to have his own room, although it is designed to sleep two.

He pays 4,270 yen a month (\$18.76) for the privilege, and told me that the equivalent in a private apartment would cost at least 30,000 yen a month (about \$132). Miamoto has his own TV, and has installed a refrigerator and desk.

This complex has several buildings, each housing about 200 per-

See BACHELOR, G3



HIDEYOYOSHI MIAMOTO
... has spent nine years in dormitory

Major Subsidies Add to Japanese Worker's Pay

BACHELOR, From G1

sons, around a central structure containing a large community dining room where three meals a day are available, including dinner for 150 yen (65 cents). The central facility also has TV rooms, game rooms, and communal bath facilities.

Miamoto, a serious young man who came to an interview at the Nissan plant formally dressed in suit and tie, and with all his personal records neatly available in his attache case, said with a smile, "I've got to do something to get myself married off. Staying a bachelor doesn't have all the advantages."

As a married man, he would be eligible for Nissan's home-ownership scheme. He now earns 258,000 yen a month (\$1,134), or 3.1 million yen a year (\$13,620). (As a tester, he's not eligible for the night shift, which brings a handsome premium).

Wouldn't he like to earn the 55 percent premium for night work? "I don't need to work at night," he says. "I have my own car, I can get along without the night shift." He is saving more than 15 percent of his salary—40,000 yen a month (\$176)—and already has accumulated about 6.5 million yen (\$28,570) in his account at the company. "It's easy to save when you live alone," he observes.

Miamoto has already figured out that if he borrowed 15 million yen (\$66,000) from the company to buy a house, he would be expected to pay back 58,000 yen (\$255 a month).

He says he "gets a kick" out of dormitory life. According to the dormitory manager, who affectionately refers to the tenants as "boys," most of the younger workers look up to Miamoto, who is a member of the committee for his own building.

About half of the 1,100 "boys"

living in Miamoto's dorm own cars (that privilege is allowed after two years' residence), and like young men in the States, they can be seen busily washing and polishing their cars in the parking spaces adjacent to their rooms.

Miamoto drives his own Nissan Stanza (the equivalent of a Datsun 710), a new car when he bought it, and from the plant daily. Although his room is located only about 10 miles from Oppama, the bumper-to-bumper traffic in this congested industrial region makes it a 50- to 60-minute trip during rush hour.

Miamoto, who took the Nissan employment test after reading a company pamphlet while still in high school, confesses that he has limited ambitions. "I want to continue to work for Nissan," he said, "and I hope to have my own home and build a happy family."

—Hobart Rowe

Local Firms Borrow a Technique From Japan to Motivate Workers

BUFFALO, NEW YORK - JUNE, 1981

By Stuart Silverstein

COURIER EXPRESS STAFF REPORTER

Fran Pieri spotted a simple way to cut costs while on the job at Westwood Pharmaceuticals Inc.

The company used to discard the bottles of its skin-care products that were left over when all of the available shipping cartons were filled. Miss Pieri, the packaging supervisor at Westwood's Dewitt Street plant, persuaded her bosses to use those bottles in sales representatives' display kits or at the company store.

That's not the only money-saving proposal Westwood management has accepted from employees outside of management lately. Company officials estimate they will save \$250,000 this year because of those sorts of suggestions.

They attribute the spate of fresh ideas to a new program partly based on the quality-circle discussion groups commonly used in Japan. According to Joseph R. Bayman, Westwood's industrial engineering manager, the intent of the program is to reverse a common American business practice of drawing productivity-improving proposals from top management only.

"This program, resources management, asks first-line supervisors and their own employees what they can do to improve productivity after they understand what productivity improvement is all about," he said.

That way of cutting costs and improving performance has been used in Japan since the 1950s. Acting on the advice of American experts, Japanese industrialists started having their plant foremen hold regular meetings with their employees to discuss ways to improve their work.

The idea caught on in Japan, but only now is it making inroads in the United States.

Japan's emergence as a leading

industrial power has been attributed in part to the success of the discussion groups, or quality circles. Because of that success in Japan and the slumping domestic economy, many U.S. business leaders during the last five years have tried similar practices here.

Thomas G. Gutteridge, associate dean of the University of Buffalo's management school, said quality-circle programs are among a wide range of techniques being used to help employees enjoy work more and become more productive.

He said quality-circle programs generally have succeeded in the United States although it is too early to tell how well.

Some attempts have failed. Workers at a Connecticut Ford plant could not accept one such program, dooming it, according to Kenneth J. Simper, a vice president at Development Dimensions International in Pittsburgh, the consulting firm that designed Westwood's program.

Dr. Gutteridge said quality circles work best at companies that have long encouraged suggestions from lower-level employees. The failures generally come at plants with more autocratic managements.

Westinghouse Electric Corp. uses quality circles at its Cheektowaga plant. Westinghouse patterned its program closely after the Japanese model.

Since January 1980, the company has set up 24 small groups of workers who meet for one hour weekly to try to solve work problems. Foremen and their workers belong to the same groups.

David R. DeLaney, an industrial engineering manager at Westinghouse who helps set up quality circles, said the chief goal of the program is to help workers enjoy their jobs more. He conceded, however, that quality-circle meetings also have

resulted in cost-cutting improvements for the company.

Although it does not have quality circles, Moog Inc. has used techniques characteristic of the Japanese workplace since the company was founded in 1951, according to Joe C. Green, Moog's vice president of human resources.

He explained that Moog gives its employees more responsibility than most American companies do. For instance, Moog has no time clocks.

It lets all of its employees fill in their time cards themselves. Moog also lacks inspection teams, letting production workers perform their own inspections.

In addition, workers are encouraged to learn various jobs. The result of the practices, Green said, is low turnover and high productivity.

Other variations of the Japanese system exist too. DDI's Simper said the system his company designed differs from others in that it is aimed at front-line supervisors — foremen and senior clerks.

Simper said that approach is taken to bolster the esteem of foremen in addition to tapping their first-hand knowledge of work settings. He said systems that immediately turn to the lowest-ranking employees sometimes cause conflicts by making foremen feel threatened.

Once the supervisors succeed in boosting productivity, they usually turn their attention to the ideas of their production-line workers, Simper said.

The training for DDI's program begins with upper-level employees. Twelve managerial-level employees at Westwood were tutored in techniques for stimulating their employees to offer suggestions that could boost productivity.

Then 18 Westwood supervisors were brought into the program. During the first of their three weekly sessions, they were asked to devise a strategy

for manufacturing aircraft. The goal of the exercise was for the supervisors to take on a broader view of what production entails and grow accustomed to cooperating more.

Afterward, they were schooled in techniques for evaluating business problems and determining how they can be solved.

Over the next five weeks, the supervisors were expected to spot poor uses of labor, materials or other resources and correct the misuses. At first, DDI tries to focus the participants' attention on relatively simple problems that can be solved within a few weeks.

"It's just basic, common sense," said JoAnne Czerniejewski, supervisor in the synthetic soap department and a participant in the resources management program.

Simper said, however, if the program works as intended, supervisors eventually tackle more complicated matters.

Bayman said the system has paid off at Westwood. For instance, Mrs. Czerniejewski devised a way to boost the output of the company's blending machine.

Another supervisor, William E. Dunphy, designed an extruder that evens the flow of synthetic soap fluids on their way to being pressed, improving uniformity of the products. And an office worker persuaded her boss to save time by using a computer for tedious invoice recording work.

None of changes has been major, but Bayman said the \$250,000 in savings the company will realize this year should be just the beginning.

"Even now I catch myself saying, 'Gee, you know, maybe we could improve this.' Or 'that's not working quite right, is there some way we could make it work better, more efficiently?'" said Mrs. Czerniejewski.

"I think it's really helped. It's just stopping and thinking."

The Kyocera Experiment

Synopsis

As the day begins, the shift's 800 employees are doing exercises in neat rows. The purpose: to get their blood flowing in harmony with company goals. The company is Kyocera, and though owned by a Japanese firm it is located in San Diego, California. Its workers are American, its management style thoroughly Japanese.

Kyocera manufactures the casings, or "packages," that hold microprocessors used in the electronics industry. The company runs much like a family. Decisions are made by consensus. Workers are assured permanent employment. Regular weekly meetings called "quality circles" encourage them to make complaints or suggestions. All these practices give the worker immense responsibility, particularly in light of the Japanese reverence for quality. In one scene, a production-line worker rejects a shipment of casings that had been approved by two top officials.

The life of Kyocera's white-collar workers, however, is less rewarding. The story focuses on the tension between Japanese managers and American salesmen. In Japan, a sales force operates more as a liaison between company and buyers than as "hard sell" artists. With their limited command of English, Kyocera's managers frequently misunderstand their salesmen's American approach. The mutual distress is worsened by the need to fill a large order for Western Electric, an important customer. The problem is resolved only by relentless consultation and by a lively *compa*, or company party.

Kyocera shows something of what two

cultures can offer each other. Kazuo Inamori, founder and president of the company's Japanese parent, observes, "Americans have to learn to manage by the heart." But the Americans too have something to offer: a flexibility, willingness to innovate, and initiative that are foreign to the Japanese.

Commentary

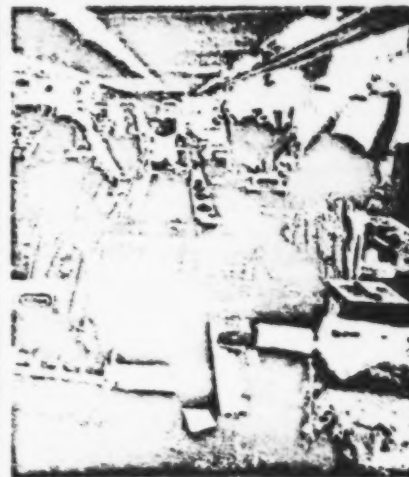
Behind the seemingly quaint details of company songs, exercises, and uniforms is a profound difference between the American and the Japanese business enterprise. The difference reflects their dissimilar purpose and place in society. To Americans, the chief purpose of a company is to make money for the shareholders. Profits are important to the Japanese too, but the Japanese firm is more fully integrated into the social system and is supposed to function for everyone's benefit. All of this is reflected in management styles.

The American company is based on an authoritarian, top-down structure and a philosophy of individualism that allows for little collective responsibility. There is a sharp division between managers, who are the thinkers and planners, and workers, who are the doers. Managers typically put career before company, advancing not only within a firm but also leapfrogging from one company to another. Trained in management techniques alone, they tend to have little appreciation for the specifics of production. Workers, for their part, do as they are told.

The Japanese business runs more through cooperation. Managers tend to stay

with one company and identify with its goals. Workers are seen as resources, encouraged to offer suggestions and make decisions that will lead to greater output and higher-quality goods. American workers get an hourly wage; Japanese workers get a share of the company's profits as a supplement to their wage.

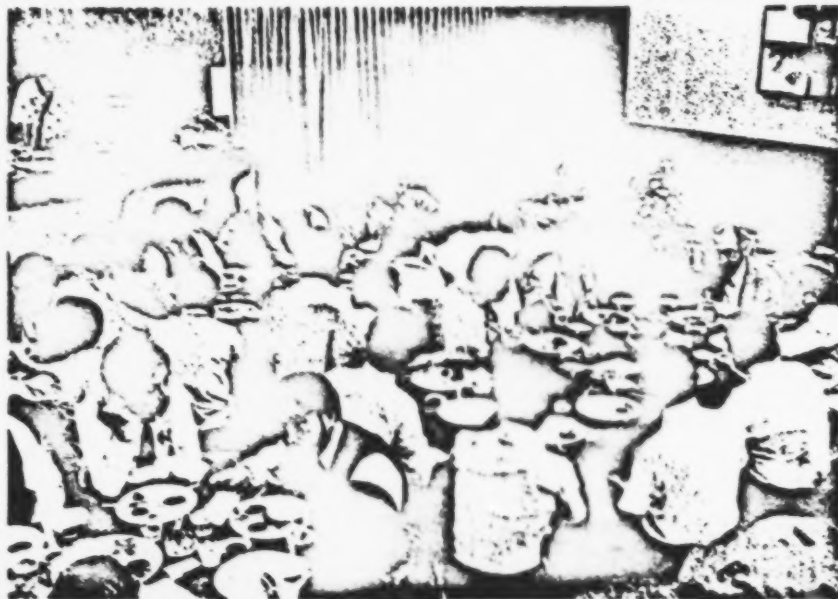
In time of crisis the difference is even more pronounced. In response to its troubles, Chrysler laid off 28 percent of its blue-collar employees while reducing its managers' and other white-collar workers' salaries only 5 to 7 percent. Mazda, by contrast, reacted to a decline in sales a few years ago by cutting the pay of its senior managers 20 percent, freezing the pay of its middle managers, and maintaining regular cost-of-living increases for its production workers.



Daily exercises are a tradition in Japanese factories. Above: a Nikon plant in Tokyo

Matsushita and Motorola

Another American plant owned by a Japanese company is a former Motorola television factory in Franklin Park, Illinois, bought in 1974 by Matsushita Electric Industrial Company to make Quasar and Panasonic television sets. The new management, according to an article in *Fortune*, made major changes almost immediately: putting workers' names on the wall at their work stations, automating some of the worst tasks, replacing fixed-speed production lines with a system the workers can control, allowing workers to stop and fix any problems they see in the production system. Before the sale, inspectors had found as many as 140 defects in every 100 TVs that came off the lines. Five years later, according to the company president, the reject rate was down to about five per 100 and warranty claims had been reduced eightfold.



The "compa" helps build company spirit